

WHAT IS CLAIMED IS:

Sub A2 [ 1. A photovoltaic module comprising a substrate, a semiconductor layer arranged on one of the principal surfaces of the substrate, divided into a plurality of sections and sealed by a encapsulation material, characterized in that

10 said encapsulation material is arranged on said principal surface of the substrate without its end face projecting outwardly beyond the end face of the substrate.

2. A photovoltaic module according to claim 1, wherein the end face of the encapsulation material is realized in the form of a first slope.

15 3. A photovoltaic module according to claim 1, wherein the end face of the substrate is realized in the form of a second slope located on the plane of the first slope of the encapsulation material.

4. A photovoltaic module comprising:

a transparent insulating substrate:

20 photovoltaic cells formed by sequentially laying a transparent electrode layer, a semiconductor photoelectric conversion layer and rear electrode layer; and

25 a sealing member for sealing the rear surface of said photovoltaic cells;

said sealing member including a principal encapsulation material covering a central area of the

rear surface of said photovoltaic cells and a steam barrier material covering a peripheral area of the rear surface of said photovoltaic cells, said steam barrier member showing a steam permeability not greater than  
5 1 g/m<sup>2</sup> day per film thickness of 100 μm.

5. Photovoltaic module comprising:

a transparent substrate:

photovoltaic cells formed on the rear surface of  
said transparent substrate;

an output lead-out wire connected to said  
photovoltaic cells;

a filling member for sealing said photovoltaic  
cells; and

15 a rear surface encapsulation material arranged on  
the rear surface of said filling member;

said output lead-out wire being drawn to the rear  
surface of said rear surface encapsulation material  
from the inside of said filling member by way of an  
output lead-out section, the filling member of said  
20 output lead-out section being not directly exposed to  
the atmosphere.

6. A method of manufacturing a photovoltaic  
module comprising:

25 a step of laying sheet of encapsulation resin  
adapted to be softened, molten and cured by heat on  
the rear surface of a photovoltaic sub-module having  
a plurality of unit cells tightly arranged on

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a light-transmitting glass substrate and then laying a protection film having dimensions greater than the glass substrate on the sheet of encapsulation resin;

5        a step of bonding the protection film to the rear surface of said photovoltaic sub-module by softening, melting and completely curing said encapsulation resin; and

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a step of cutting off the portion of the encapsulation resin extending from said glass substrate as a result of the melt of said encapsulation resin along with the corresponding portion of the protection film under the condition of keeping the temperature of the extending portion of said encapsulation resin above the softening point of the encapsulation resin.

15        7. A method of manufacturing a photovoltaic module comprising:

20        a step of laying a sheet of encapsulation resin adapted to be softened, molten and cured by heat on the rear surface of a photovoltaic sub-module having a plurality of unit cells tightly arranged on a light-transmitting glass substrate and then laying a protection film having dimensions greater than the glass substrate on the sheet of encapsulation resin;

25        a step of bonding said sheet of encapsulation resin and said protection film to said photovoltaic sub-module under pressure in vacuum, while heating then in a vacuum heating/bonding apparatus;

a step of taking said photovoltaic sub-module out of said vacuum heating/bonding apparatus on the way of curing said encapsulation resin;

5            a step of cutting off the portion of the encapsulation resin extending from said glass substrate as result of the melt of said heating/bonding along with the corresponding portion of the protection film;  
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and

10            a step of heating and completely curing said encapsulation resin in a separate heating apparatus.